remaining thirty-seven cases. From the study of each of these thirteen cases, Mirallié found that in the majority of instances glycosuria had been absent for as long as eleven months before the termination of the disease. He concluded that in the evolution of cancer of the pancreas there are two distinct periods—an early glycosuric and a later non-glycosuric.

Bard and Pic express some doubt as to whether glycosuria occurs even as commonly in the early stages of the disease as Mirallié would lead one to believe, because all their seven cases which they reported came under observation between seven weeks and six months of the onset of the symptoms. They state that the importance of glycosuria as a symptom of primary cancer of the pancreas has passed through three phases: At an early period glycosuria was considered a common symptom and an important one in the diagnosis of the disease; in the second period, which corresponded with their memoir published in 1888, its diagnostic value was not considered of much importance; in the third period, inaugurated by Mirallié, a new importance was assigned to glycosuria in the evolution of cancer of the gland, in that it was present during the early stages and absent during the later stages of the disease.

The writers now take up the question again in this article, with the object in view of ascertaining more definitely the actual frequency of glycosuria in primary pancreatic cancer, and also of explaining some of the phenomena in connection with it. They state that from their personal observations, and from the study of the cases related in the literature with sufficient detail from which to draw conclusions, it is possible to divide the cases of glycosuria into two definite groups: first, those where there was simple gylcosuria, and secondly, those in which the glycosuria was associated with definite clinical symptoms of true diabetes.

They then report at length personal observations on two fatal cases coming under the first category and on which autopsies were obtained. The point of interest on which they dwell was the occurrence of sclerosis of the pancreas and a cirrhosis of the liver running parallel one to the other, the former being due to obstruction by pressure of the duct of Wirsung and the latter of the ductus choledochus. It is to this sclerosis of the pancreas and not to the effect of the cancer that Bard and Pic attribute the glycosuria. Seven of Mirallié's cases belonged to this group.

The cases of primary cancer of the pancreas associated with glycosuria and true diabetic symptoms are then taken up. The writers do not give notes of any personal observations, but they review the cases published in the literature belonging to this group. Four of Mirallié's cases were cases of glycosuria with clinical symptoms of diabetes. After reviewing these cases and some others published after Mirallié's communication, Bard and Pic are led to believe that some of them were instances in which the diabetes antedated the appearance of the pancreatic cancer, and hence that the former was entirely independent of the latter. This would then tend to diminish the percentage of the cases of glycosuria actually due to cancer of the pancreas. They have been able to collect from the literature, since the publication of Mirallié, thirty-seven new observations on primary pancreatic cancer. In only four of these was glycosuria present. In other words, up to the time of publication, 150 cases of primary cancer of the pancreas had been recorded in the literature, with only seventeen instances in which it had been stated that glycosuria was present. In many of the cases no mention of a urinary examination is made, so that it is possible that sugar may have been present and had not been observed. It is thus possible that the number of cases of glycosuria may be greater than seventeen. On the other hand, Bard and Pic believe that in some of the cases recorded the diabetes was primary, which would leave really a smaller number that could be definitely attributed to cancer of the pancreas.

These observers explain in a very interesting way the disappearance of glycosuria and the diabetic symptoms observed in many of the recorded cases. They claim that the glycosuria in the early stages is due not to the direct effect of the cancer, but to the sclerosis of the gland produced by pressure of the tumor on the excretory duct. They support Lépine in his view that pancreatic diabetes is due to the suppression of an internal glycolytic ferment which enters the general circulation under normal conditions. The explanation they suggest for the disappearance of the glycosuria in the late stages is, that the cancer-cells take on not only the histological characters of the pancreatic cells, but also their physiological function of producing the glycolytic ferment, which in the early stages of the disease is diminished or absent, owing to sclerosis of the gland-tissue. This restoration of the glycolytic ferment leads to the normal transformation of the carbohydrates and the consequent disappearance of the glycosuria.

Scarlatinal Albuminuria.—DITTMAR (*Glasgow Medical Journal*, December, 1897, p. 426) publishes the results of his observations on the urine of ninety-one consecutive cases of scarlet fever admitted to the wards of the City of Glasgow Fever Hospital during a period of six months. The patients varied in age from one year and two months to fifty years, the majority, 84.6 per cent., being under fifteen years, and 62.6 per cent. being under ten years of age.

At least two specimens of urine from each patient, voided about 6 A.M. and 6 P.M., were examined daily. In some cases as many as three or four specimens from each patient were daily analyzed, and in all over ten thousand specimens were examined for albumin and hæmoglobin. Most of the cases remained in the hospital for fifty-six days.

Albumin or blood-coloring matter, or both, were detected at some period during the stay in the hospital in forty-eight (52.7 per cent.) of the cases examined, and of these twenty-nine (60.4 per cent.) were under ten and thirty-nine (81.2 per cent.) under fifteen years of age. In most of the cases the quantity of albumin was small, and could be detected only by careful testing. In some cases merely an occasional trace was detected; but in others the albumin persisted in the urine for weeks, and was sometimes very considerable in amount. In some of the cases "blood" alone seemed to be present, the albumin bearing, as far as it was possible to judge, a proportion to the hæmoglobin such as exists in normal blood. In other cases both blood and albumin were found, the amount of albumin being out of all proportion to the hæmoglobin as it exists in normal blood.

There was no particular date on which albumin seemed particularly prone to appear, although a relatively larger number of the cases showed the presence of an abnormal constituent during the latter half of the first week, during the second week (ninth to the twelfth days), and on the thirty-first day than at any other period of the illness. The cases seemed to divide themselves into two groups: (1) Cases of "early" albuminuria, and (2) cases of "late" albuminuria. Twelve of the cases came under the heading of "early" albuminuria. In nine of these twelve cases the albumin disappeared only to reappear again later in the disease, the interval during which the urine was free from albumin varying in these cases from three to forty-eight days.

Mahomed claims that in some cases of nephritis, notably in scarlet fever, one sometimes observes a stage in which only blood-coloring matter can be detected in the urine. This stage he terms the "pre-albuminuric stage." The explanation advanced was that early in the disease there is observed a condition of high tension in the arterial system, which, if sufficiently severe, leads to transudation of hæmoglobin before the appearance of albumin in the urine. A similar but converse phenomenon is sometimes observed during the decline of a nephritis, the albumin disappearing first, the hæmoglobin later. Dr. Thomson has suggested the term "post-albuminuric" stage for this period. Dittmar was not able to confirm these observations in the study of his cases.

The conclusions that Dittmar arrives at are as follows:

1. That albuminuria or hæmaturia, or both, occurred in 52.7 per cent. of the cases observed.

2. That the cases seemed to divide themselves naturally into three classes: (*a*) Those of pure albuminuria in which albumin only was detected; (*b*) those of hæmaturia, in which "blood" seemed to be present; (*c*) those of albuminuria and hæmaturia, the albumin being greatly in excess of the hæmoglobin as found in the blood.

3. That dropsy or œdema of the superficial parts was observed unmistakably in only three of the cases.

4. That a "pre-albuminuric" and a "post-albuminuric" stage (if the word be allowed) do not exist in the proper sense of the terms.

5. That a pulse of "high" tension was not an invariable accompaniment even of undoubted nephritis.

The Smegma Bacillus.—Important additions to our knowledge of the smegma bacillus have been made by CZAPLEWSKI and LASER (*Münch. med. Woch.*, 1897, No. 43). These observers have been able to cultivate the organisms. Czaplewski used nutrose-serum-agar; Laser used agar smeared with human blood. The colonies grow rapidly, resembling those of streptococci or diphtheria bacilli. The tenacity with which the bacilli resist acids in decolorizing was preserved in the cultures, proving that the resistance is not due to fat from the medium, but to some other cause. Laser was unable to discover any pathogenic action in white mice and guinea-pigs. The practical importance of these investigations, if confirmed, is very great. Within twenty-four hours a culture can be obtained. The appearance of the colonies and the peculiar staining reactions, combined with the rapid growth, make it easy to distinguish the organisms from others, so that inoculations, requiring as they do so much more time, will no longer be necessary.

The Sputum in Cancer of the Lung.—HAMPELN (*Zeitschrift für klin. Med.*, Bd. xxxii., p. 247) gives the results of a rather rich experience. He agrees with former writers that the hemorrhagic character of the sputum is important, though he claims there is no characteristic tint. Moderate and temporary hemorrhages are more likely to be encountered, though in rare cases the bleeding is prolonged—to two months in one case—and copious. As to the microscopic characteristics of the sputum, it has heretofore been held that only the finding of actual bits of broken-down new-growths is of diagnostic value, yet such bits have been rarely found, only once among the authors cited. Hampeln has made careful comparative examinations of the cells found in the sputum in various diseases. He holds that the normal, non-pigmented polygonal cells of the alveoli occur so rarely, if at all, in sputum, that they do not play a great part in differential diagnosis. When in disease cells are found which plainly differ from the ordinary pavement and cylinder cells of the mouth or air-passages—cells which are non-pigmented, polymorphous, polygonal, of various sizes, sometimes gigantic, with plain nucleus and nucleolus, single or in masses—the diagnosis of new-growth is permissible. The seat or origin of the growth cannot be determined from the character of the cells, so that a distinction between bronchial and pulmonary cancer is not possible. A number of illustrations of cells of various kinds, including some from cases of cancer, add to the value of the article. It is interesting because it shows the reaction against the idea long prevailing, that there is nothing diagnostic about the cells of new-growths. That these are not specific in shape, as was once thought, is, of course, admitted by the author; yet there are many details of size, shape, character of nucleus, and staining properties that, when considered in relation to their source, may enable an experienced observer to draw conclusions of value.

Mucus in Stools.—ADOLF SCHMIDT, who has done such useful work in the application of staining-methods to mucus in sputum, has made a valuable contribution to the present subject, one that is all the more important because the examination of feces is strangely neglected by many. Although the result of the present work may seem trifling, yet it includes a revision of many points that were long thought to be settled, but in fact were not. The details are indispensable to clinical investigators, but it will suffice here to give some of the author's conclusions. The conception of a special disease, enteritis membranacea, cannot be based on the quantity and shape of mucus in the stools. The clinical picture described by Nothnagel under the name of colica mucosa may, however, be separated from other forms of enteritis.

The basis of most membranous bodies in feces is mucin. The refractoriness of these masses is due to the constant presence of fats and soaps in considerable quantity. Fibrin has never been positively demonstrated in the mucous discharges. The number of round cells in intestinal mucous is not always so small as might be supposed from the examinations of fresh preparations. For the diagnosis of ulcerative processes, the absence of mucus among the cells is more important than the appearance of large numbers of round cells. We have at present no certain guides to the sources of mucus or the cells in the mucus. The strongest evidence of a source in the small intestine is the digestion of the cell bodies, leaving the nuclei free. Except